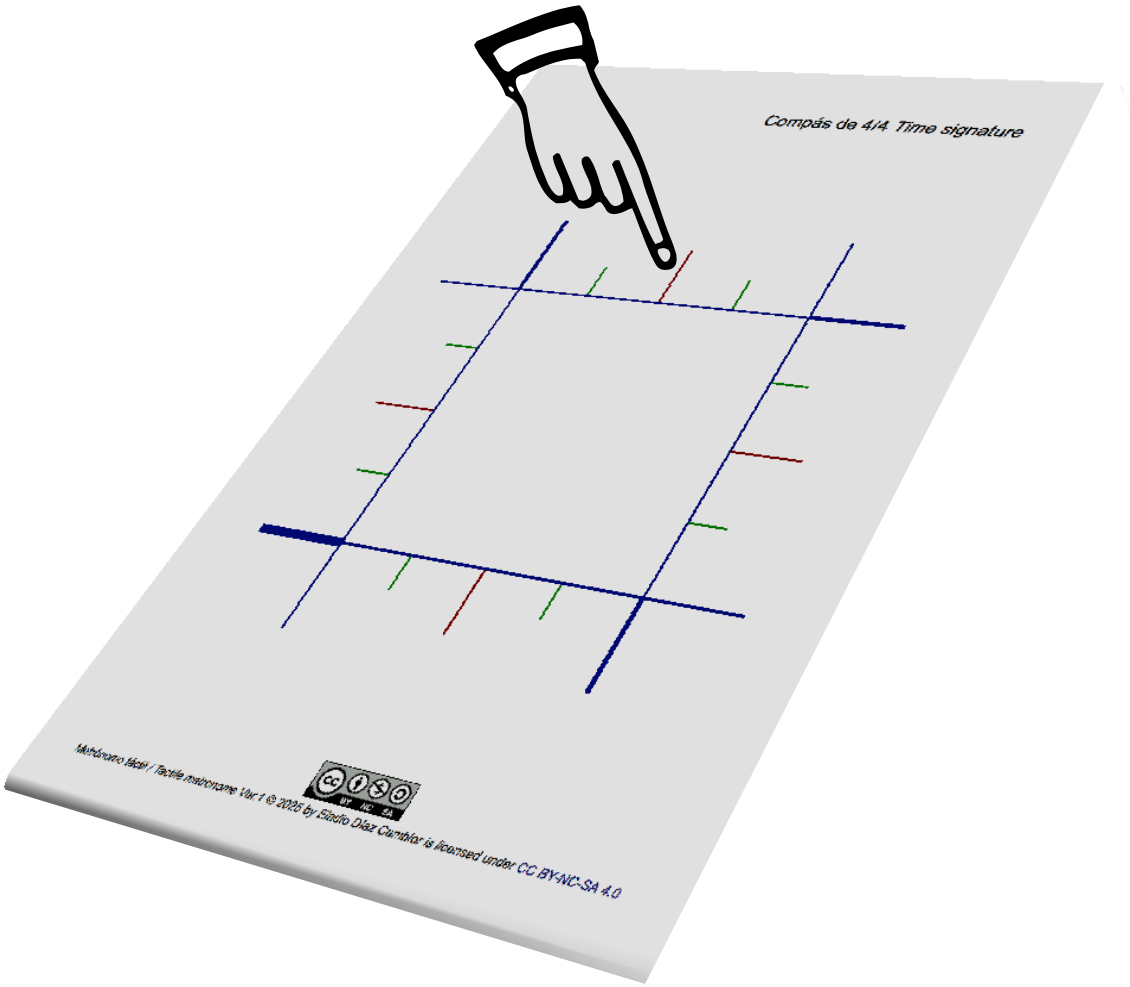
Tactile metronome


Compás de 4/4 Time signature
Metrónomo táctil / Tactile metronome Ver.1 © 2025 by Eladio Díaz Camblor is licensed under CC BY-NC-SA 4.0

Eladio Díaz Camblor

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Note to the English edition:

This text is an English translation of the original Spanish work “Metrónomo táctil”, wrote by the same author and shared under the same Creative Commons license (CC BY-NC-SA). The translation preserves the instructional and humorous tone of the original while adapting terminology to standard English musical language.

This english translation has been done by ChatGPT Artificial Intelligence

This work was created using only free software from the OpenOffice suite.

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If the kind reader wishes to contribute to slightly inflating the author’s self-esteem, feel free to send an email to: cantalicio@gmail.com

Version 1
Gijon, Asturias, Spain. November 2025

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This little work aims to offer guidance to beginners in the world of solfège and music reading.

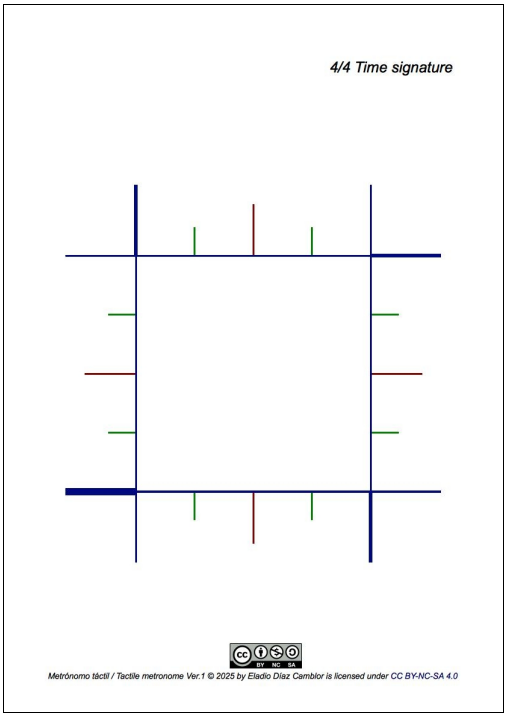
One of the greatest difficulties faced by beginners is the high level of abstraction required to understand the different time signatures and the duration of rhythmic figures.

Traditionally, these abstract concepts are brought into the physical world by “marking the beat,” moving the hand in the air and tracing different shapes depending on the time signature: 2/4, 3/4, 4/4… Another aid is the mechanical or electronic metronome, which marks the beats using sounds and the movement of a cursor.

This little work aims to offer yet another aid — in fact, a double one: visual and, especially, tactile, as will be explained below.

In the attached pages, the reader will find a series of diagrams indicating the time signature to which each one corresponds.

The illustration shows the page for the 4/4 time signature, as indicated in the upper-right corner.



In the center of the page we see a blue square. Each side represents one of the four beats of the 4/4 measure, which is represented in musical notation by a quarter note.

In the corners of the square appear blue lines. One of them — the thickest (lower left) — represents the accented first beat of the measure.

The diagram is designed to be read clockwise, beginning at the thick blue line. The medium-thickness blue lines represent the beginning of each of the remaining beats, ending at the thin blue lines.

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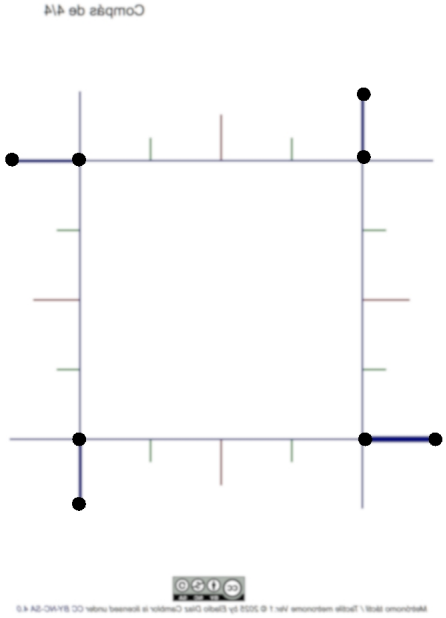
The red lines falling in the middle of each side of the square represent eighth notes, and the green lines, combined with the red ones, represent sixteenth notes.

As it stands, this and the other diagrams can serve as visual reinforcement for reading time signatures, running your finger along the diagram while the sound of a conventional metronome helps keep a steady tempo.

This alone would already be useful. But with minimal intervention from the user, this diagram can also provide a tactile reinforcement for understanding the measure and the duration of notes.

To obtain the tactile reinforcement, turn the page over so that the back becomes visible and, using a ruler and a ballpoint pen that does not write (or a similar object), trace firmly to leave a deep groove in the paper, taking care not to tear it. For this operation, it is advisable to place the paper on a soft surface.

The only blue lines that must be traced are those marked with black dots in the following figure. It is not necessary to trace the sides of the square, but all the other lines should be traced — both the red (eighth notes) and the green (sixteenth notes).



Reverse side of the 4/4 time signature page, suposely seen by transparence

Once this is done and the page is returned to its normal position, you will see little “ridges” where the grooves made on the reverse side have been raised.

These raised ridges will serve as tactile reinforcement, making it easier to follow the measure at the tempo set by the conventional metronome. Feeling the raised bumps under your finger makes the durations of the various rhythmic figures perceptible. The lines corresponding to the different rhythmic values have been drawn at different heights so that the required one can be selected for the passage being studied.

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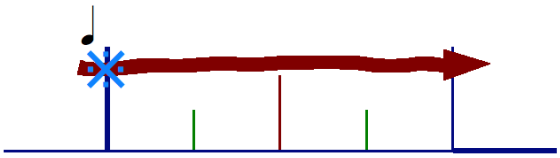
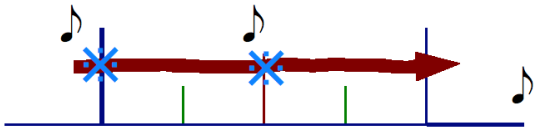
The next graphic shows how a quarter note would feel in a 4/4 measure.

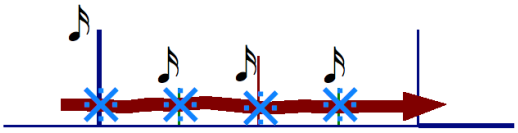


A quarter note occupies one beat (one side of the square). The brown thick line represents the movement of the finger from left to right. The symbol ※ represents the tactile sensation received when the finger passes over the raised ridge. The quarter note ends at the thin, non-raised blue line. The next quarter note begins when the finger turns to begin the next beat.

In the next diagram we have the eighth notes. It is easy to understand that the brown thick line receives two tactile sensations, each corresponding to an eighth note.



The next figure would be the sixteenth note. The diagram would be something like this:



There are four tactile sensations in a single beat. The finger travels much lower to pass over the short lines of the sixteenth notes.

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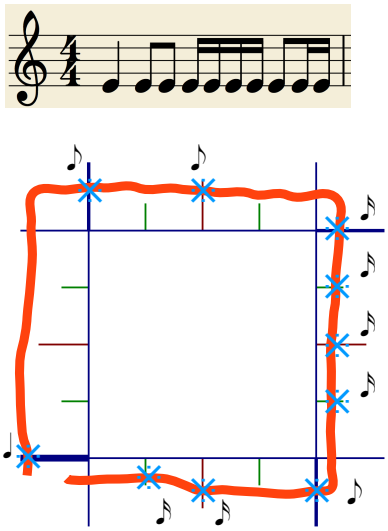
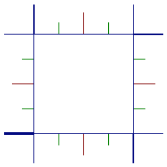
Next we see how this entire measure would feel in the tactile metronome. Each blue symbol represents a tactile sensation.



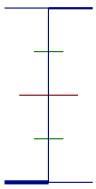
Repeating this procedure on each of the other pages, we will have tactile metronomes for the various time signatures.

The supplied time signatures are:

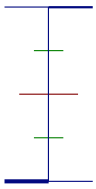
4/4



2/4



3/4



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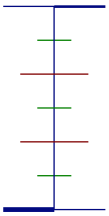
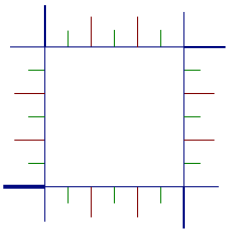
6/8



12/8



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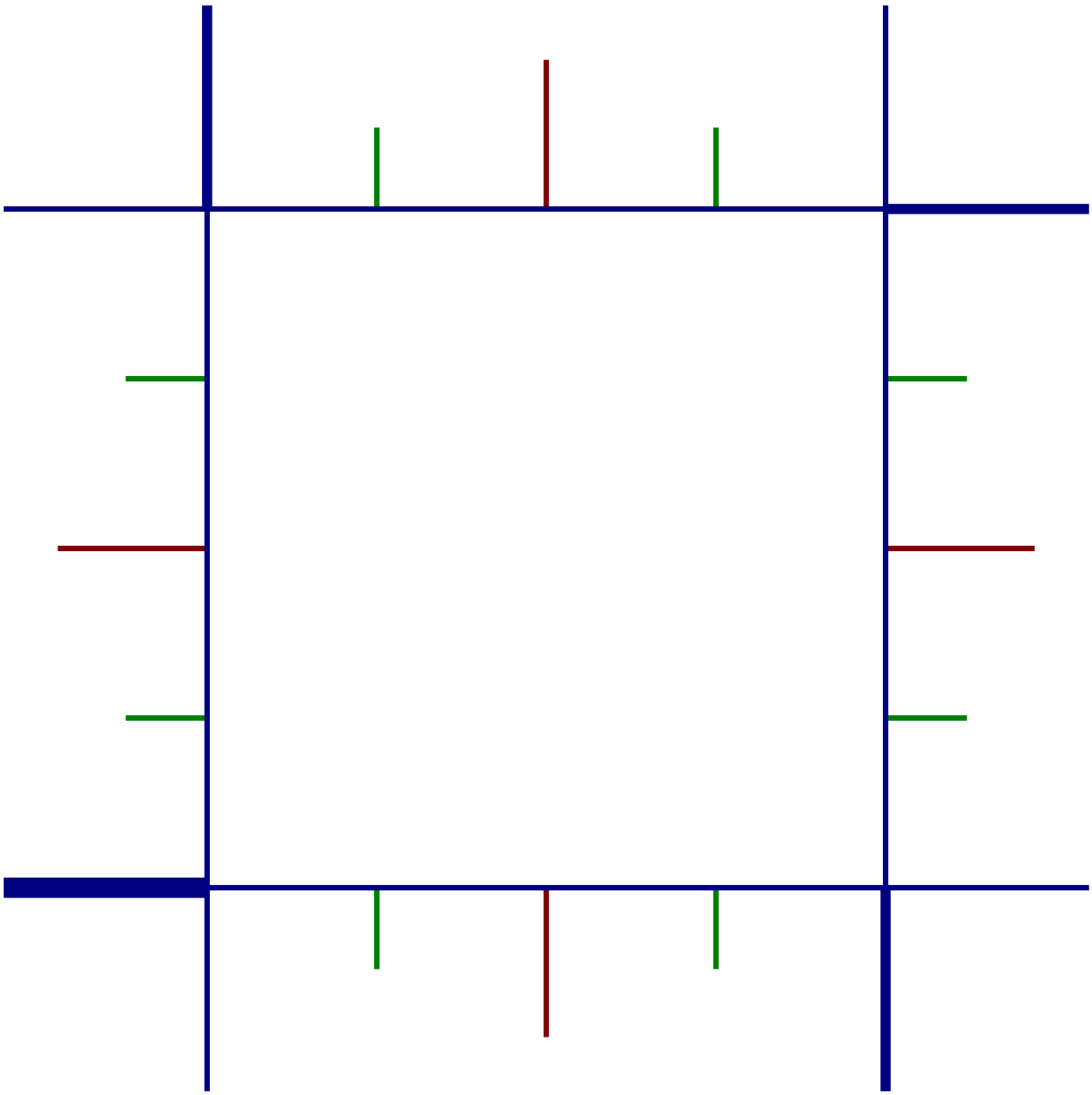
4/4 Time signature



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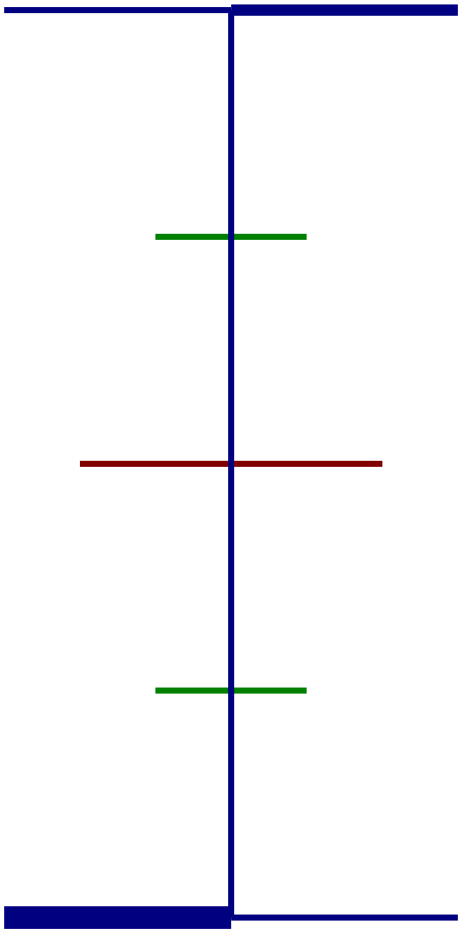
2/4Time signature



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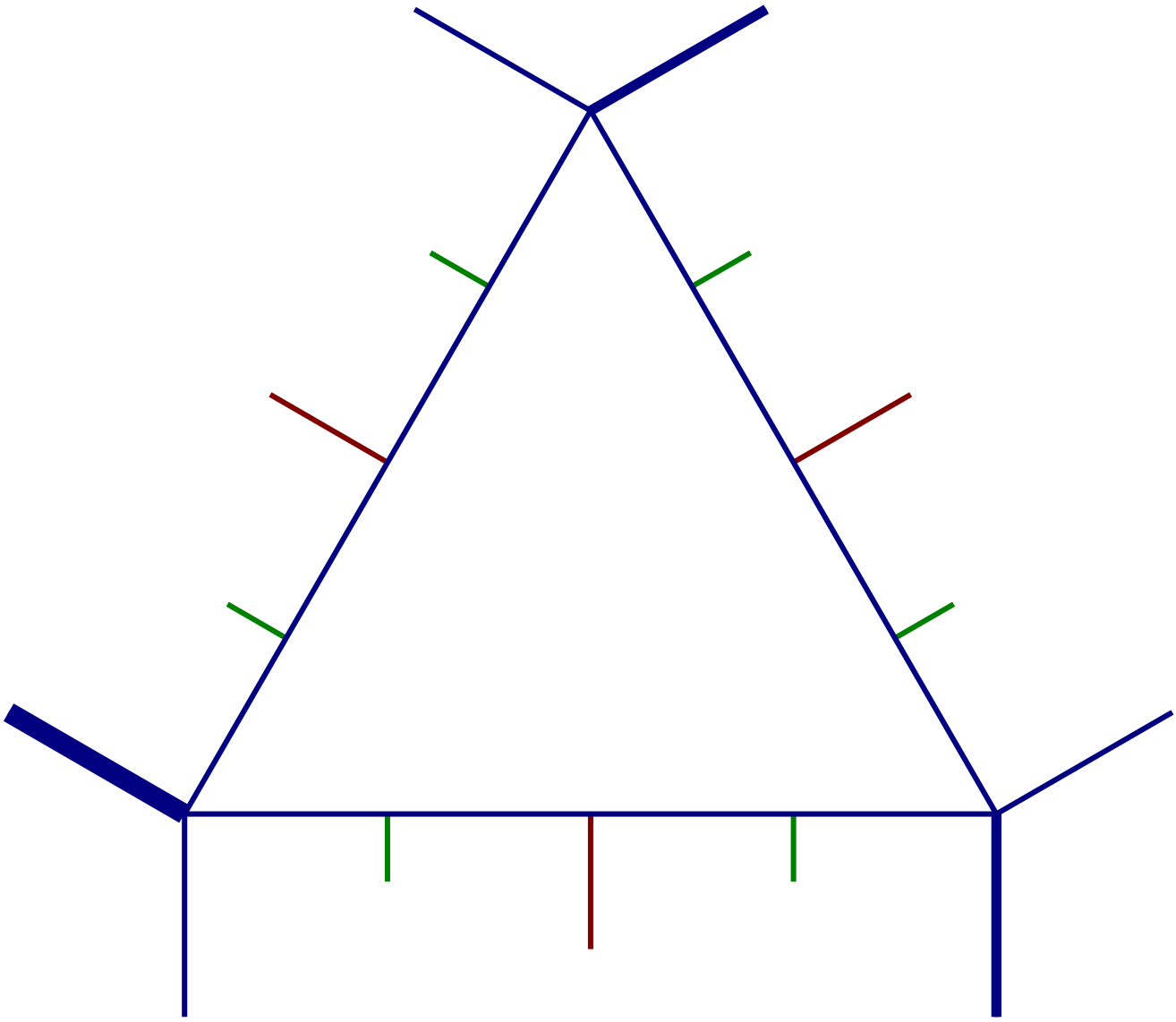
3/4Time signature



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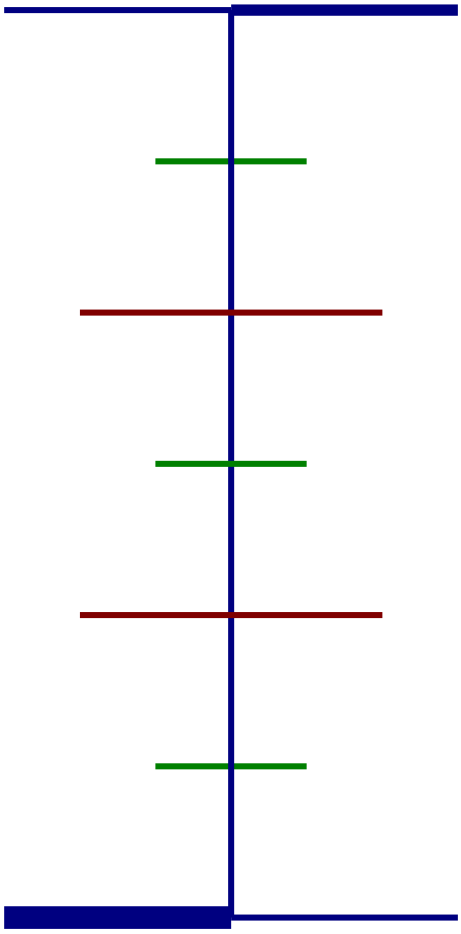
6/8Time signature



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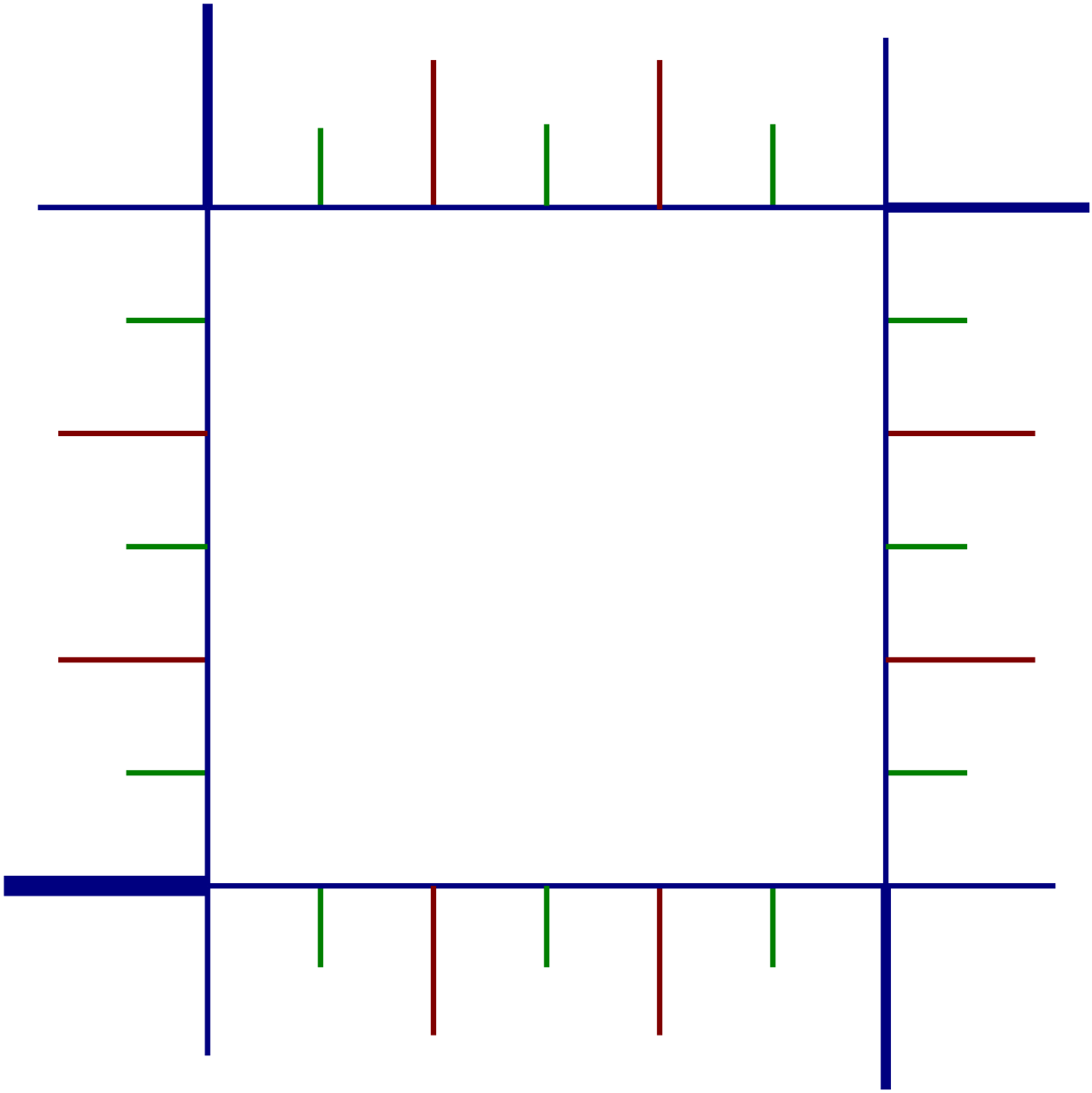
12/8 Time signature



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